Nonimmune hydrops fetalis developed due to congenital rubella infection: A case report

Havva Sutcu1,2, Cenk N. Sayın1,2, Isil Uzun1,2, Cihan Inan1,2, Selen Erzinçan1,2, Cem Yener1,2, Sinan Ates1, Fusun G. Varol1,2

1Department of Obstetrics&Gynecology, 2Division of Perinatology, Faculty of Medicine, Trakya University, Edirne, Turkey

Introduction

Hydrops fetalis is defined as an abnormal fluid accumulation in two or more fetal compartments, including skin edema, ascites, pericardial and pleural effusions.

Case

A 29-year-old woman gravida 2, abortion 1 with a history of hypothyroidism was referred at the 26th weeks of gestation due to NIHF. The patient’s first trimester screening test was in the low risk area for aneuploidies and she was regularly followed by her obstetrician. We have found severe fetal hydrops with the presence of skin edema, ascites together with pleural and pericardial effusions on detailed ultrasound examination (Figure 1). Fetal echocardiography revealed pulmonary stenosis with tricuspid valve regurgitation. Absence of end diastolic flow in the umbilical artery and reverse “a” wave in the ductus venous were also detected by Doppler ultrasound.

The patient’s blood type was rechecked and was found as ARh(D) positive. Indirect coombs test was also negative. The peak systolic velocity in the middle cerebral artery was in normal range, so fetal anemia was not suspected. Serologic tests for congenital infections including parvovirus B19, syphilis, toxoplasmosis and cytomegalovirus, were all negative but maternal immunoglobulin (Ig) M and IgG for rubella were positive.

Besides, “low avidity” was observed for rubella IgG. Then, we have administered corticosteroids for fetal lung maturation and magnesium sulfate for neuroprotection. However, three days after these drug regimens, pregnancy was complicated with “mirror syndrome” and the patient was delivered by emergency cesarean section. A severely hydropic female infant was born weighing 1550 g, with a 1st minute Apgar score of “0”. Active cardiopulmonary resuscitation was performed for 45 minutes but the infant did not recover. The parents did not accept post-mortem examination.

Conclusion

The etiology of NIHF is highly heterogeneous and unfortunately, a clear etiological factor can not to be determined in many cases. Therefore, stepwise and detailed evaluation is necessary to make a diagnosis and helpful counseling to the parents.